

Appl. No.: 10/502,425
November 16, 2010
Reply to Office Action mailed July 20, 2010

Remarks

Introduction

This Reply after is submitted in response to the Office Action mailed July 20, 2010. Claims 24-45 are pending with Claims 24 and 43-45 rejected, Claims 29-33 objected to and Claims 25-28 and 34-42 withdrawn from consideration. The Office Action included the following rejections and identifications of allowable subject matter.

Claims 24 and 43-45 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 7,006,555 ("Srinivasan").

Claims 29-33 were objected as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant has amended Claim 29 to include the recitations of its base claim, namely Claim 24. Applicant respectfully requests that all the pending claims be allowed in view of the above amendments and following remarks.

Reply to the 35 U.S.C. § 102(b) Rejection of Independent Claim 24

Applicant respectfully submits that Srinivasan is not prior art under 35 U.S.C. § 102(b) to Applicant's Claim 24.

As noted in the Office Action, 35 U.S.C. § 102(b) requires a cited U.S. patent document to have been published "more than one year prior to the date of application for patent in the United States." Although Srinivasan was filed on October 27, 1999, Srinivasan did not publish until its issue date of February 28, 2006.

The present patent application was filed before Srinivasan published. In particular, the present application was filed on January 25, 2005. The present application also claims the benefit of FR0200856, filed January 24, 2002, and PCT/FR/03/00222, filed January 23, 2003.

Regardless of whether Srinivasan would be considered prior art under another subsection of 35 U.S.C. § 102, Applicant respectfully submits that Srinivasan fails to show or otherwise suggest each recitation of Applicant's independent Claim 24.

The Examiner cites AQM_{TOTAL} to show Applicant's claimed "directly estimating quality of said digital audio signal as a function of said quality indicator." In doing so, the Examiner considers AQM_{TOTAL} to be a single-valued quality indicator associated to a time window of an audio signal. Although AQM is an acronym for "Audio Quality Measure" in Srinivasan, AQM_{TOTAL} is not associated to the quality of an audio signal. To the contrary, AQM_{TOTAL} is associated with an audio signal's suitability for encoding. An audio signal can be suitable or unsuitable for encoding independent from the audio signal's quality. For at least this reason, Srinivasan is fundamentally different from that recited by Claim 24.

There are several reasons why it is inaccurate to liken AQM_{TOTAL} to Applicant's claimed "quality" of an encoded digital audio signal. First, AQM_{TOTAL} is computed before any coding is actually performed. As a matter of fact, AQM_{TOTAL} is the result of Srinivasan's pre-encoding computation, and the value of AQM_{TOTAL} is used by Srinivasan to determine whether or not the audio signal should eventually be encoded. *See, e.g.*, Srinivasan, col. 20, line 55 ("If this block were to be coded"); col. 21, lines 31-32: ("in order to determine when to encode and when to suspend encoding"); and col. 21, lines 44, 45 ("encoding ... may be inhibited"). In other words, when AQM_{TOTAL} is computed, there is no encoded signal having a quality that could be estimated. Therefore, AQM_{TOTAL} cannot show or otherwise suggest Applicant's claimed "directly estimating quality of said digital audio signal as a function of said quality indicator."

Secondly, Srinivasan's (un-coded) audio signal and Srinivasan's encoded signal have a different informational content. Srinivasan's encoded signal also contains an ancillary message. Therefore, AQM_{TOTAL} does not measure the quality of Srinivasan's encoded signal, but simply the audibility of the ancillary message.

Furthermore, Srinivasan's AQM_{TOTAL} cannot be considered a quality indicator used for evaluating the quality of the coded signal; rather, AQM_{TOTAL} is the result of an evaluation process. If anything,¹ the spectral energies $E_c[b]$ might arguably be considered as analogous to the elements of a quality indicator recited by Claim 24. But for each block (or "time window") of the audio signal, comprising 512 samples, there are 42 critical bands, and therefore 42 values

¹ Applicant reserves the right contest this statement. Applicant makes this statement only for the sake of argument and does not admit it as true.

$E_c[b]$ to be calculated. Therefore, Srinivasan's quality indicator " E_c " comprises a number of elements which are much higher than 10, and which is only twelve times less (instead of one hundred times less) than the number of audio samples in the time window.

Moreover, Applicant's independent Claim 24 recites its method is performed in real time. Srinivasan, however, is inherently incompatible with real time, at least because Srinivasan requires:

- (1) Computing AQM_{TOTAL} for several audio blocks, or time windows (*see, e.g.,* Srinivasan, col. 20, line 30-col. 21, line 15);
- (2) determining if the blocks are suitable or unsuitable for encoding depending on the corresponding values of AQM_{TOTAL} (*see, e.g.,* Srinivasan, col. 21, lines 21-24);
- (3) counting the number of blocks which are unsuitable for coding among a set of "y" adjacent blocks (*see, e.g.,* Srinivasan, col. 21, lines 31-33); and
- (4) depending on the counting, deciding whether encoding can be performed or not (*see, e.g.,* Srinivasan, col. 21, lines 31-43).

Encoding of the "y" blocks can only begin after all the blocks have been evaluated for determining their suitability for encoding. As such, not only does Srinivasan fail to show or otherwise suggest real time evaluation, Srinivasan goes teaches away from real time evaluation.

For at least these reasons, independent Claim 24 is not anticipated or made obvious by Srinivasan. Applicant kindly requests that the anticipation rejection of Claim 24 be withdrawn and respectfully submits that Claim 24 is in condition for allowance in view of Srinivasan by itself or in combination with the other documents of record.

Reply to the Objection of Claim 29

Applicant has amended Claim 29 to be in independent form, including the recitations of Claim 24. Because the Examiner noted that Claim 29 would be allowable if rewritten in independent form including all of the limitations of the base claim, namely Claim 24, Applicant respectfully submits that Claim 29 is in condition for allowance.

Appl. No.: 10/502,425
November 16, 2010
Reply to Office Action mailed July 20, 2010

Reply to the Rejection of the Dependent Claims

At least because Claims 30-33 and 43-45 depend on one of independent Claims 24 or 29, which are allowable for the reasons discussed above, Claims 30-33 and 43-45 are also in condition for allowance.

Withdrawn Dependent Claims

The remaining dependent claims, namely Claims 25-28 and 34-42, are considered withdrawn as being directed to a non-elected species, but should be rejoined upon the confirmation that a generic claim is found allowable.


Conclusion

In view of the amendments and remarks presented above, it is respectfully submitted that all of the present claims of the present application are in condition for allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact applicant's undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

Appl. No.: 10/502,425
November 16, 2010
Reply to Office Action mailed July 20, 2010

It is believed that a one-month extension of time and corresponding fee are required and are petitioned for in the documents being filed herewith. It is not believed that any fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required (including fees for net addition of claims) is also hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,


Adam M. Kaplan
Registration No. 59,109

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Charlotte Office (704) 444-1000
Fax Charlotte Office (704) 444-1111

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT & TRADEMARK OFFICE ON November 16, 2010.